

FIG. 1

Type	Origin	PB1: Positions												
		52	54	105	175	208	298	364	383	384	396	431	464	
H7N7	Bratislava 82 chicken	K	K	N	D	K	L	E	P	I	Y	Y	D	
H7N7	Rostock34 chicken	K	K	N	D	K	L	E	S	L	Y	H	D	
H1N1	WSN33 human	R	R	T	N	R	D	D	S	L	N	N	D	
H1N1	Wisconsin88 human	R	K	N	E	K	D	D	S	L	Y	Y	D	
H2N2	Singapore57 human	K	K	D	K	E	S	S	S	L	Y	Y	D	
H2N2	Ann Arbor60 human	K	K	D	K	E	S	S	S	L	Y	Y	D	
H3N2	Hongkong68 human	K	K	D	K	E	S	S	S	L	Y	Y	D	
H3N2	Shiga97 human	K	K	D	K	E	S	S	S	L	Y	Y	D	
H3N2	Hongkong82 swine	K	K	D	K	E	S	S	S	L	Y	Y	D	
H3N2	Katakyushu93 human	R	K	D	K	E	S	S	S	L	Y	Y	D	
H3N8	Tennessee86 equine	K	K	N	N	D	K	K	E	E	S	S	D	
H4N2	Minnesota80 turkey	K	K	N	N	D	K	K	E	E	S	S	D	
H4N6	Ontario99 swine	K	K	N	N	D	K	K	E	E	S	S	D	
H5N1	Hongkong97 human	K	R	D	K	K	D	K	K	L	D	S	D	
H6N1	Taiwan99 chicken	K	K	D	K	K	D	K	K	L	D	S	D	
H7N7	London73 equine	K	K	D	K	K	D	K	K	L	D	S	D	
H9N2	Pakistan99 chicken	K	D	K	K	D	K	K	K	L	E	S	D	

FIG 1 (continued)

Type	Origin	PB1: Positions									
		473	576	584	628	633	636	644	645	654	741
H7N7	Bratislava 82 chicken	V	L	R	M	S	E	A	V	S	A
H7N7	Rostock34 chicken	V	L	R	L	S	E	V	V	S	A
H1N1	WSN33 human	L	—	H	R	L	D	V	—	N	T
H1N1	Wisconsin88 human	L	—	—	R	L	E	V	V	T	A
H2N2	Singapore57 human	>	>	>	>	>	E	V	V	S	A
H2N2	Ann Arbor60 human	>	>	>	>	>	E	V	V	S	A
H3N2	Hongkong68 human	>	>	>	>	>	E	V	V	S	S
H3N2	Shiga97 human	>	>	>	>	>	E	V	V	S	S
H3N2	Hongkong82 swine	>	>	>	>	>	E	V	V	S	S
H3N2	Katakyushu93 human	>	>	>	>	>	E	V	V	S	S
H3N8	Tennessee86 equine	>	>	>	>	>	E	V	V	S	S
H4N2	Minnesota80 turkey	>	>	>	>	>	E	V	V	S	S
H4N6	Ontario99 swine	>	>	>	>	>	E	V	V	S	S
H5N1	Hongkong97 human	>	>	>	>	>	E	V	V	S	S
H6N1	Taiwang99 chicken	>	>	>	>	>	E	V	V	S	S
H7N7	London73 equine	>	>	>	>	>	E	V	V	S	S
H9N2	Pakistan99 chicken	>	>	>	>	>	E	V	V	S	S

Fig.2

plasmid	constitution	other segments	orig.titer	CAT assay
				293T MDCK
map PB1	<u>v1</u> / <u>c1</u>	x3' <u>c2</u> <u>S</u> <u>L</u> <u>P</u> x5' <u>H</u> <u>L</u> <u>V</u> <u>MA</u> <u>v2</u> T		
WSN-PB1	WSN		WSN	7x10 ⁸ /ml 11 2
pHL3102	WSN	FPV	WSN	1x10 ⁸ /ml 22 38
pHL3103	FPV	WSN	WSN	2x10 ⁷ /ml 10 13
pHL3130	WSN	FPV	WSN	1x10 ⁵ /ml 14 25
pHL3131	WSN	FPV	WSN	2x10 ⁶ /ml 18 25
pHL3115	FPV		WSN	3x10 ⁵ /ml 17 28
pHL1844	FPV		FPV	3x10 ⁹ /ml 48 100

Fig.3
plasmid
constitution
CAT assay
other
segments
orig.titer 293T MDCK

plasmid	constitution	other segments	orig.titer	CAT assay 293T MDCK
map PB1 <u>v1 / c1</u>	x3' <u>c2</u> <u>S_I</u> <u>P</u> <u>x5'</u> <u>H</u> <u>L</u> <u>V</u> <u>MA</u> <u>v2</u> <u>T</u>			
WSN-PB1	WSN		7x10 ⁸ /ml	11 2
pHL3204	FPV		2x10 ⁸ /ml	12 3
pHL3203	FPV		1x10 ⁸ /ml	24 42
pHL3246	FPV		3x10 ⁸ /ml	10 3
pHL3247	FPV		4x10 ⁶ /ml	20 29
pHL3258			1x10 ⁷ /ml	28 50
pHL3259	FPV		3x10 ⁷ /ml	32 61
pHL3268	FPV		3x10 ⁷ /ml	39 71
pHL1844	FPV		3x10 ⁹ /ml	48 100

Fig. 4

1000 2000 3000 4000 5000

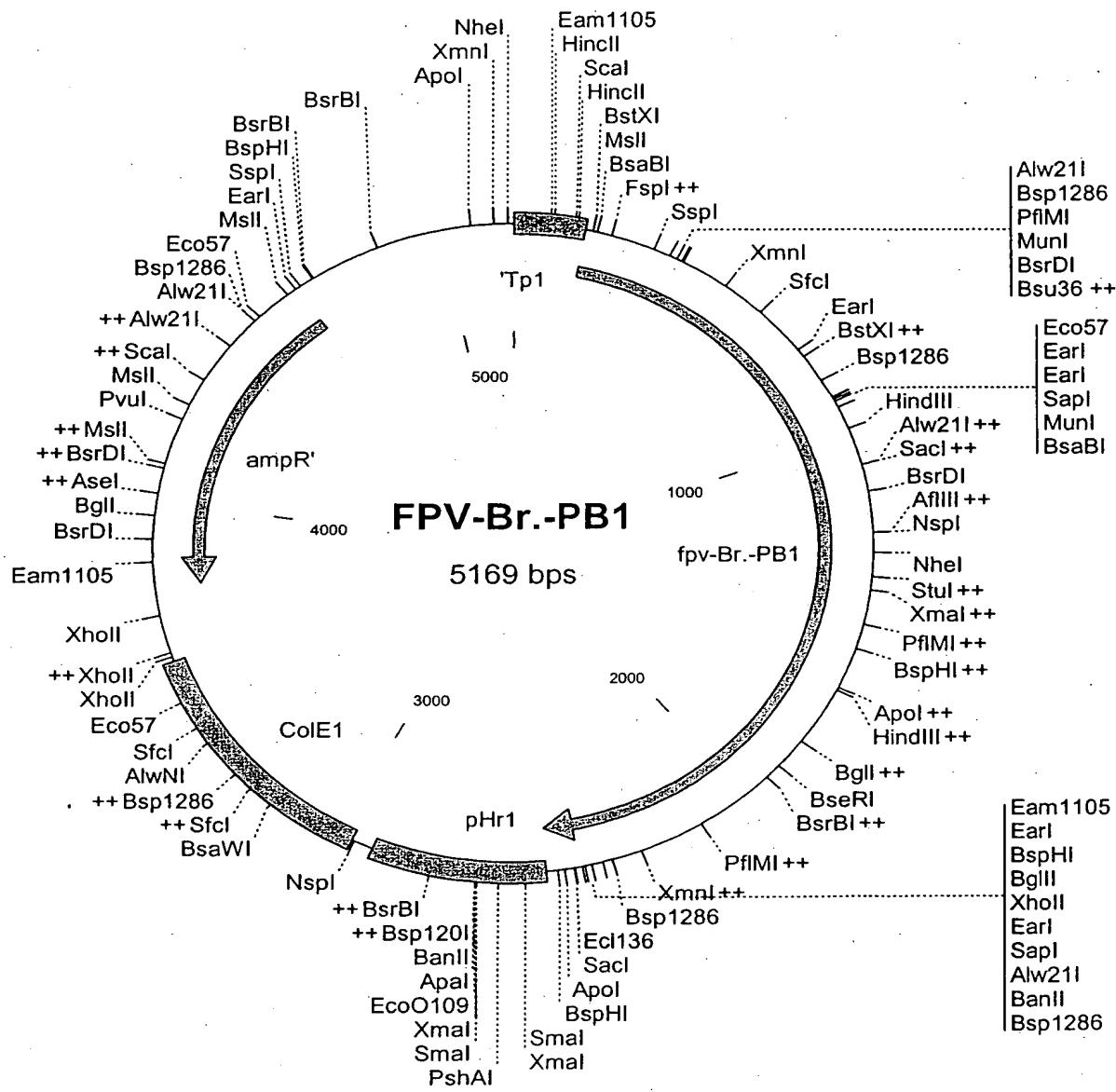


Fig. 5

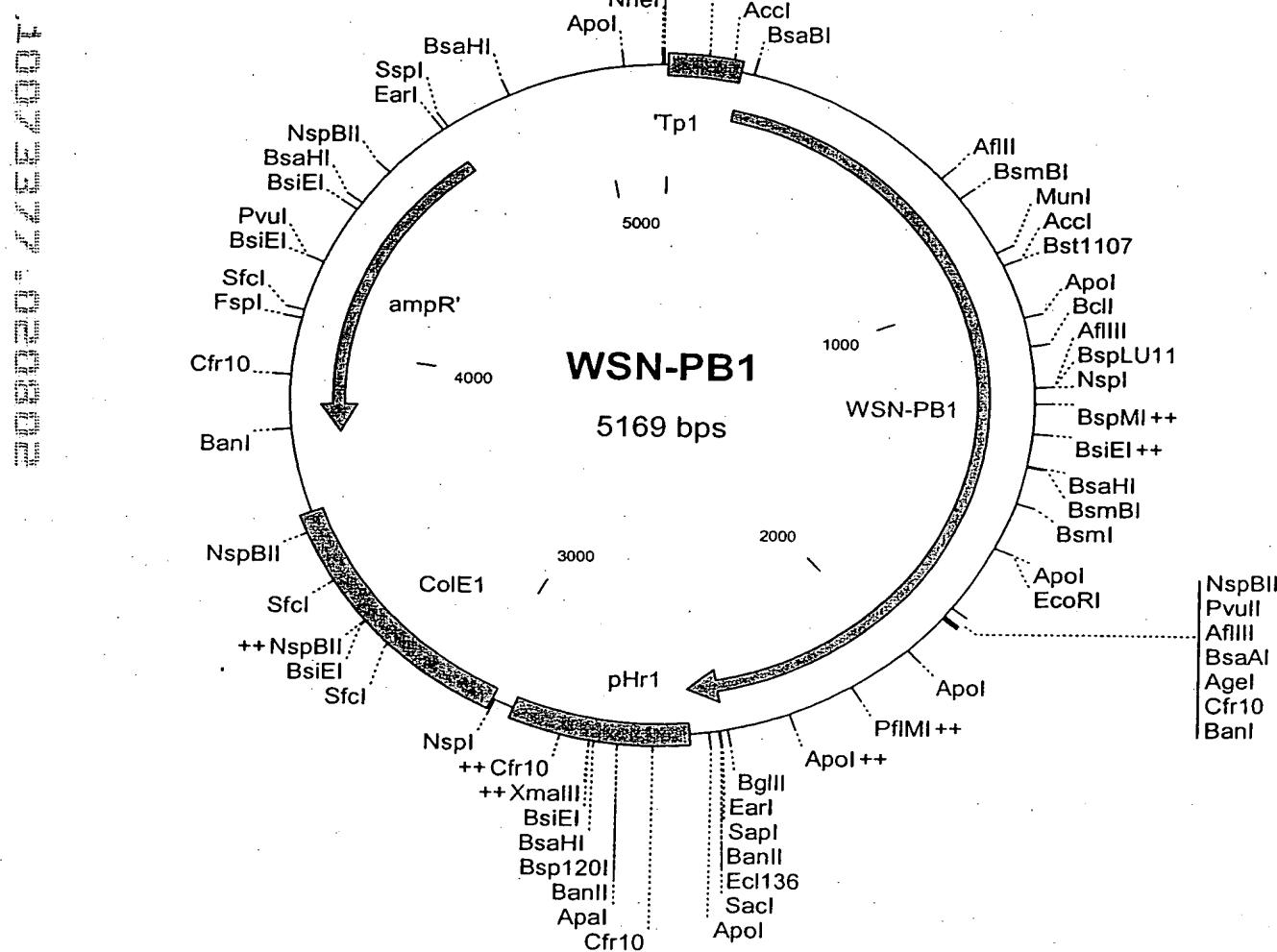


Fig. 6

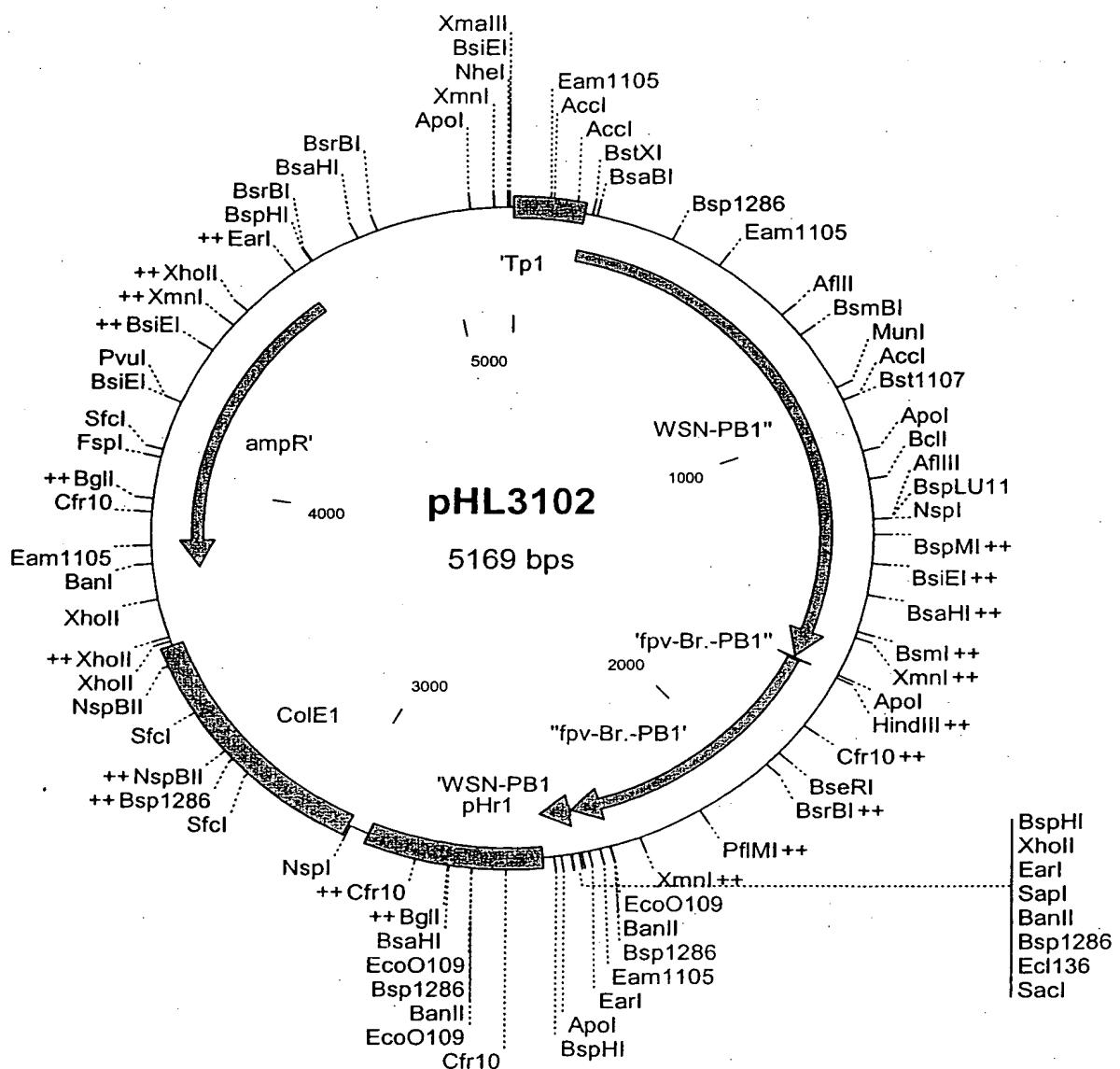


Fig. 7

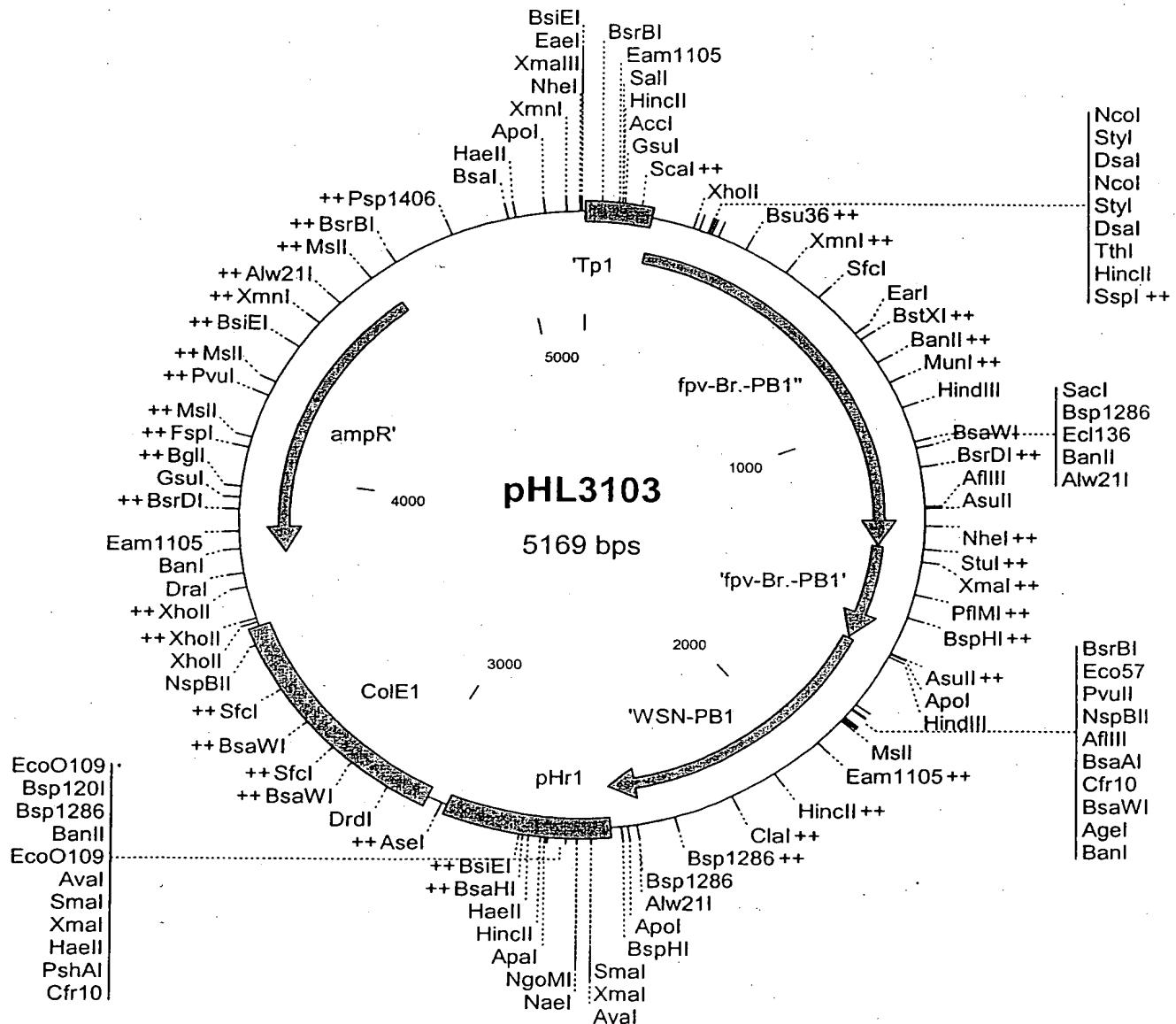


Fig. 8

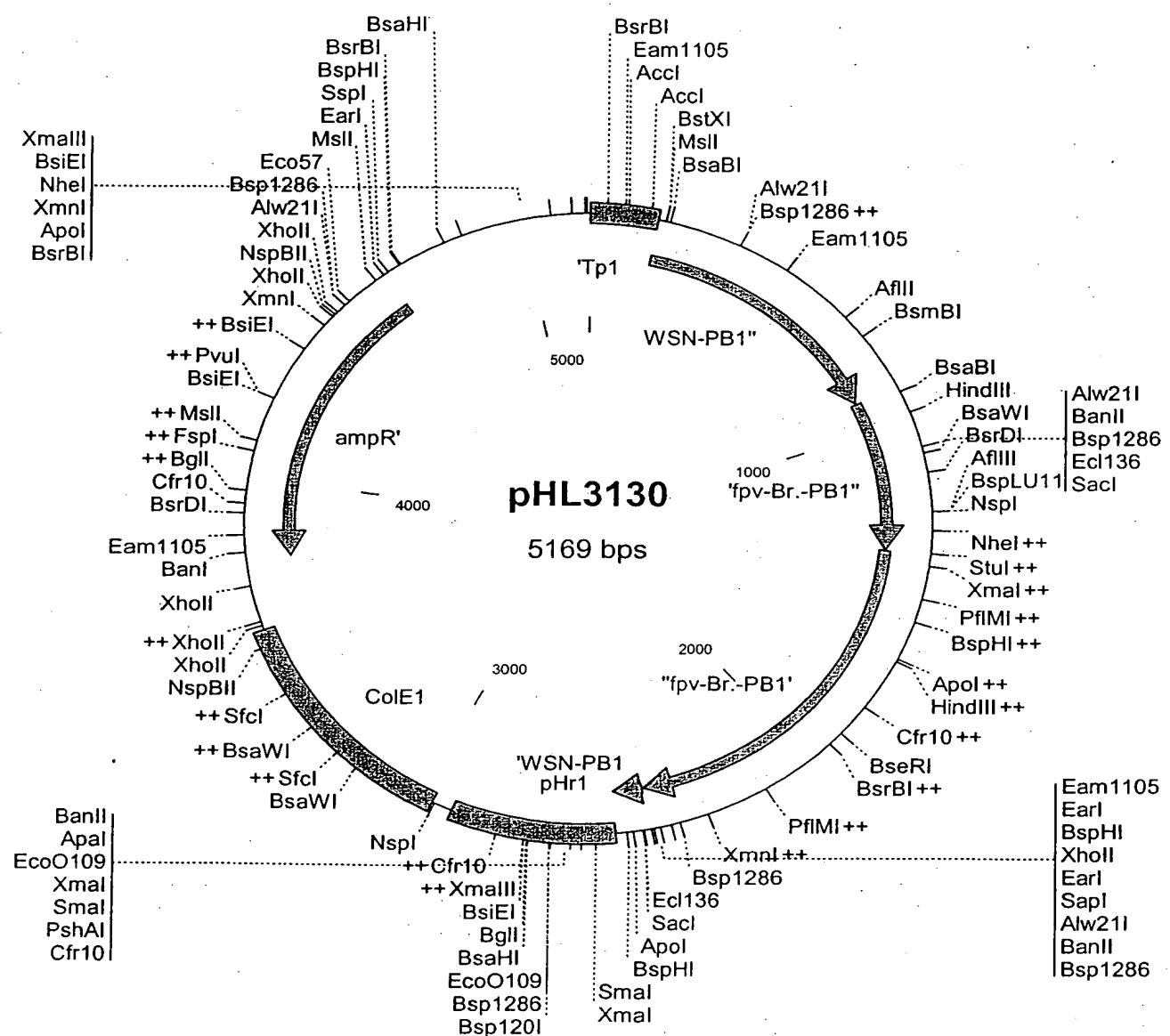


Fig. 9

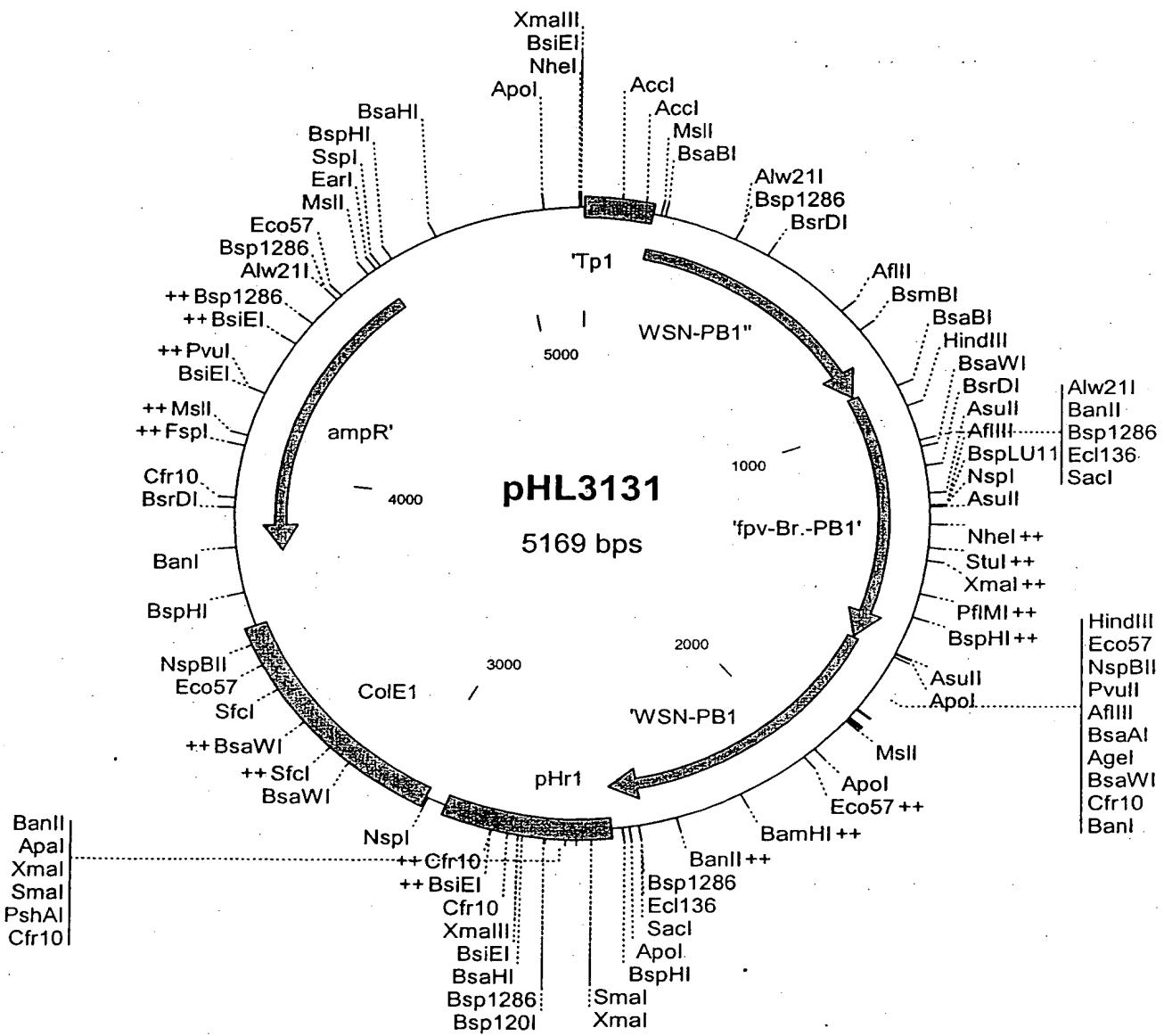


Fig. 10

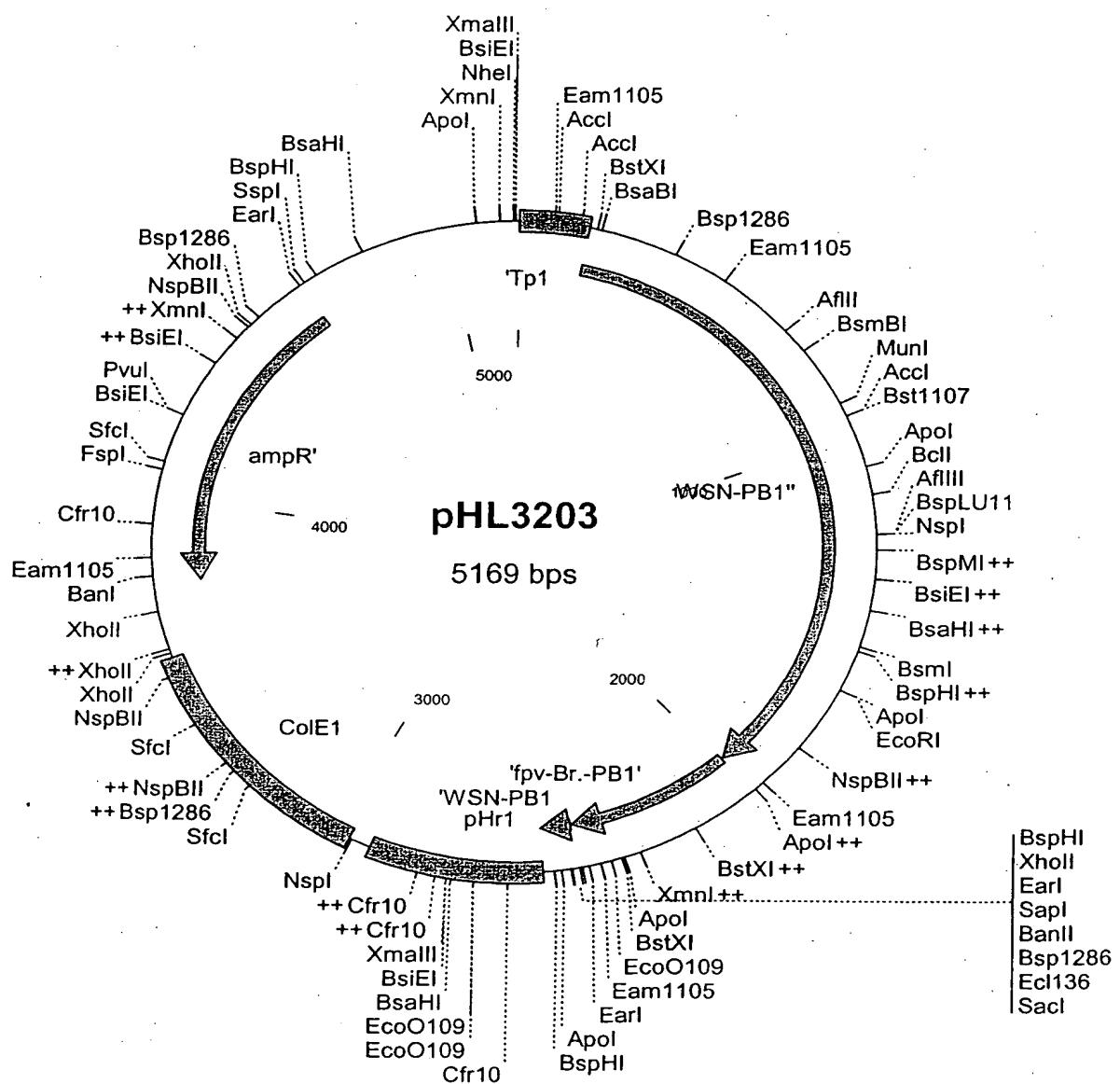


Fig. 11

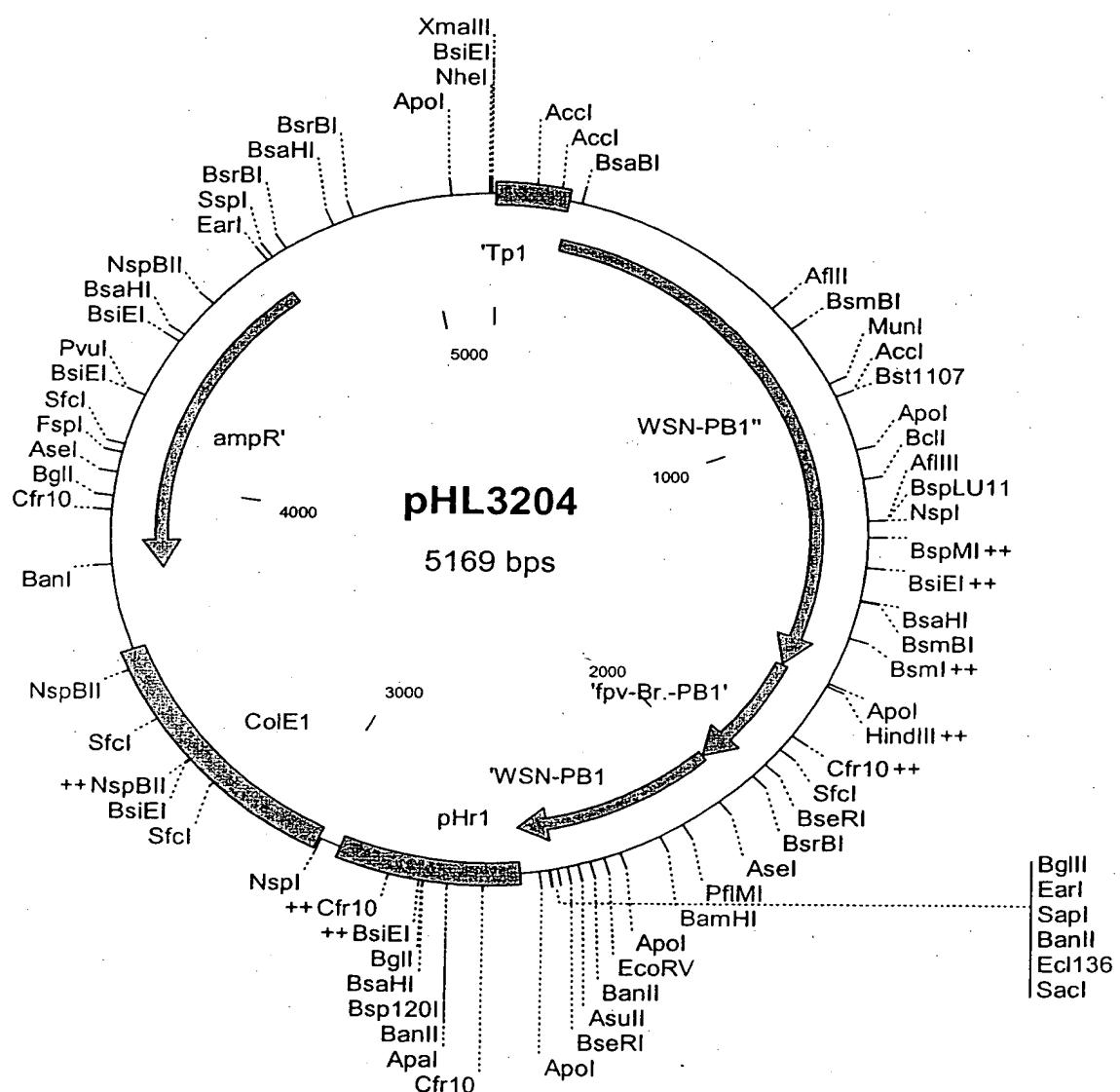


Fig. 12

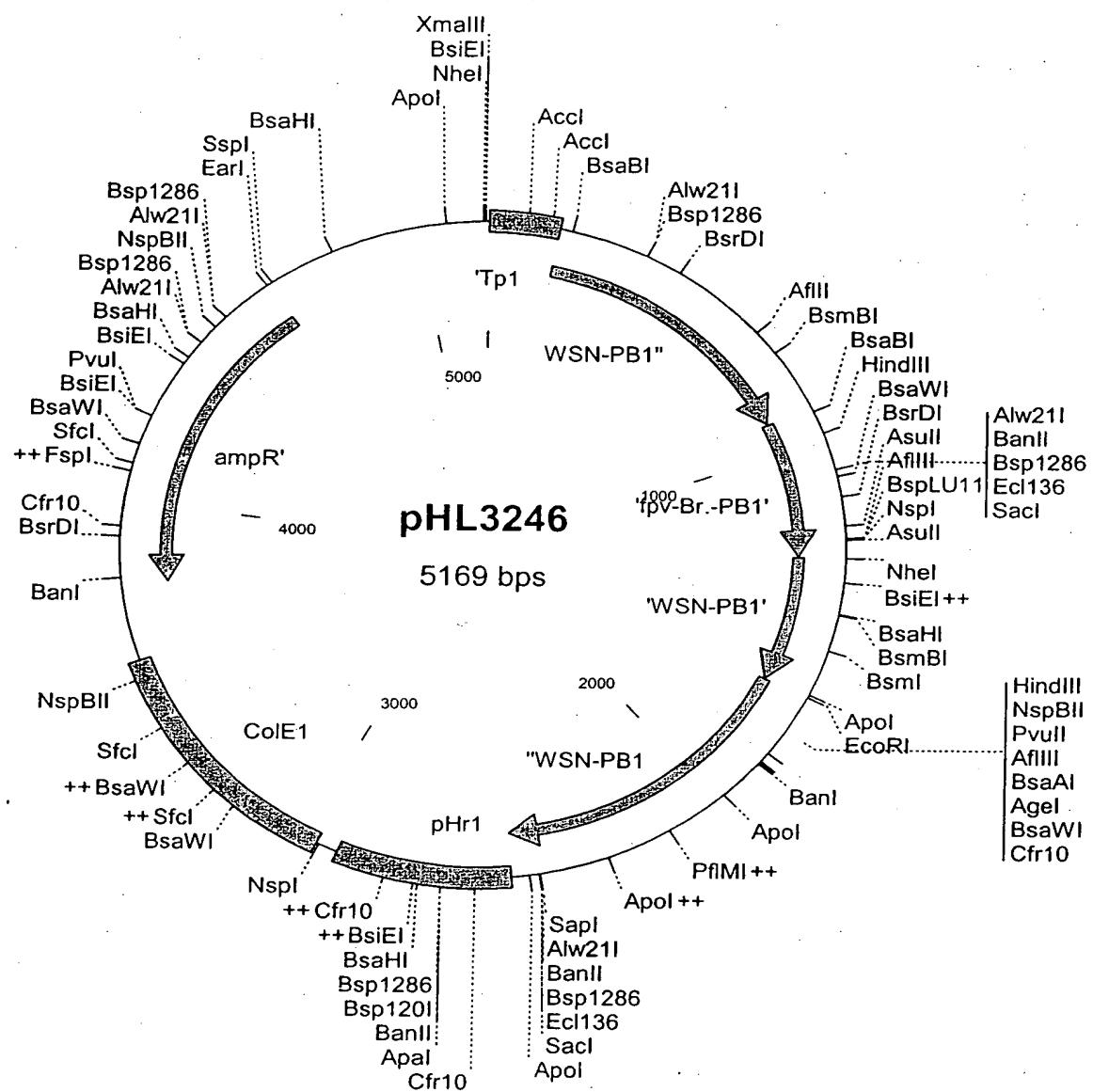


Fig. 13

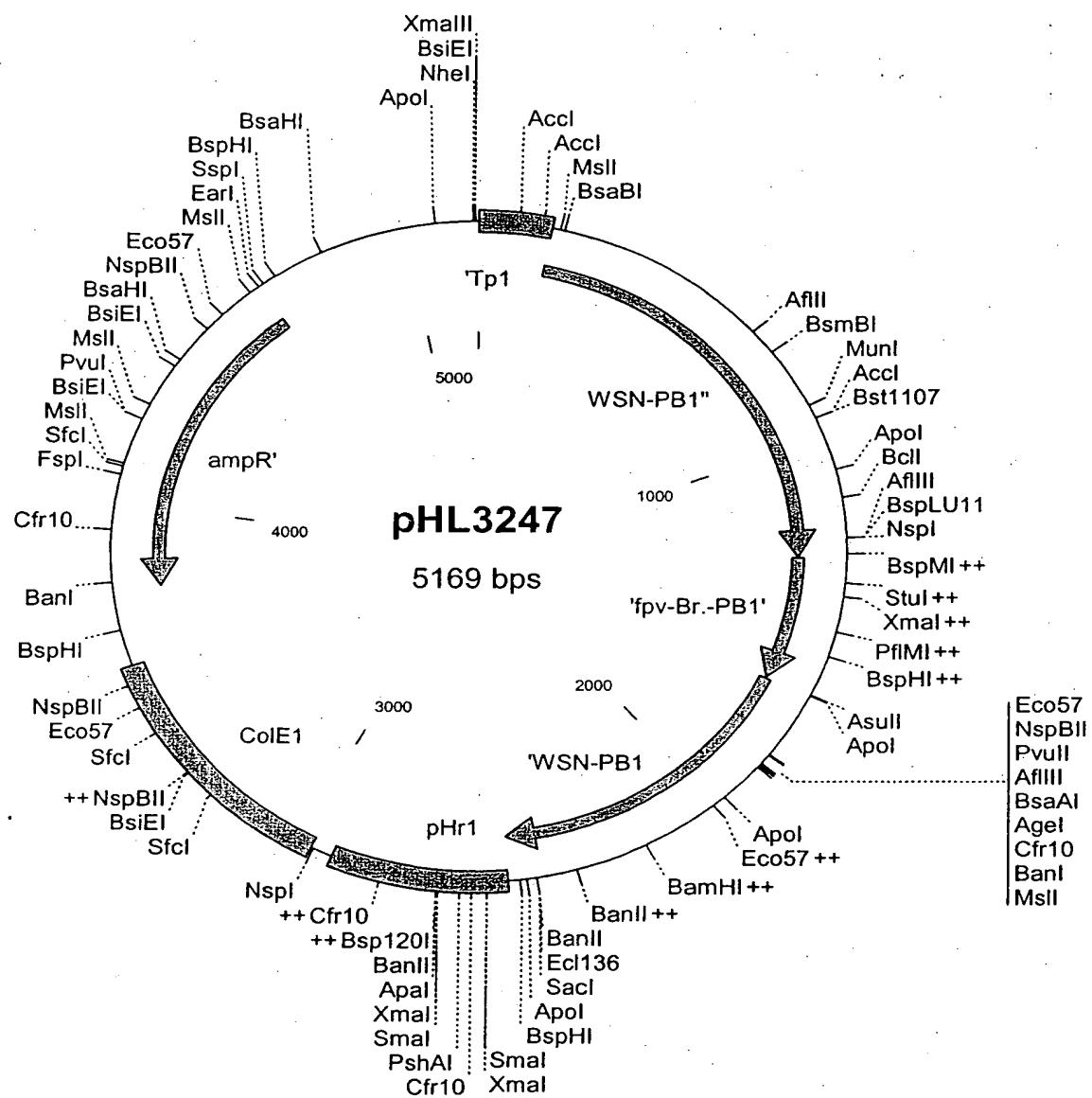


Fig. 14

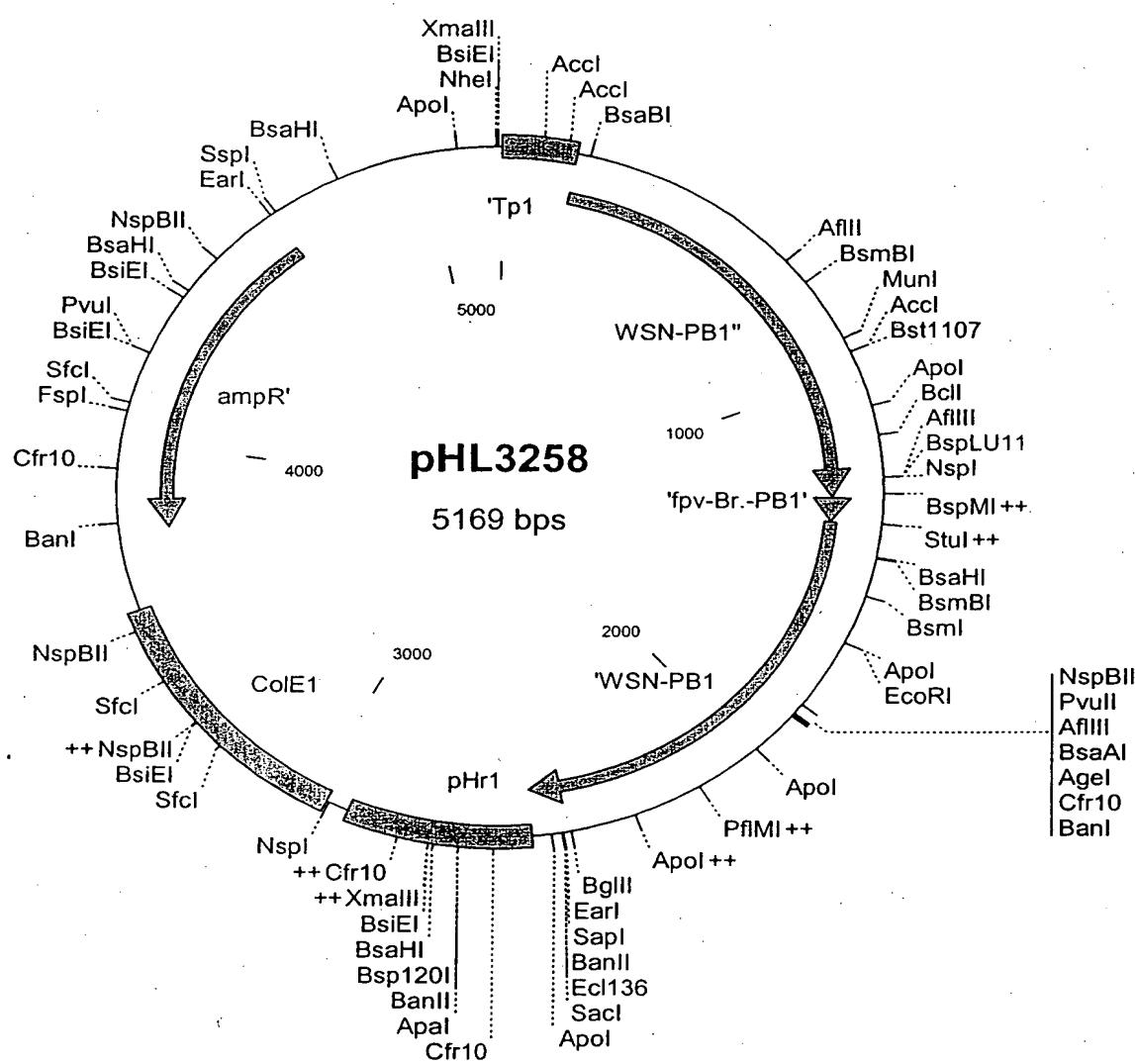


Fig. 15

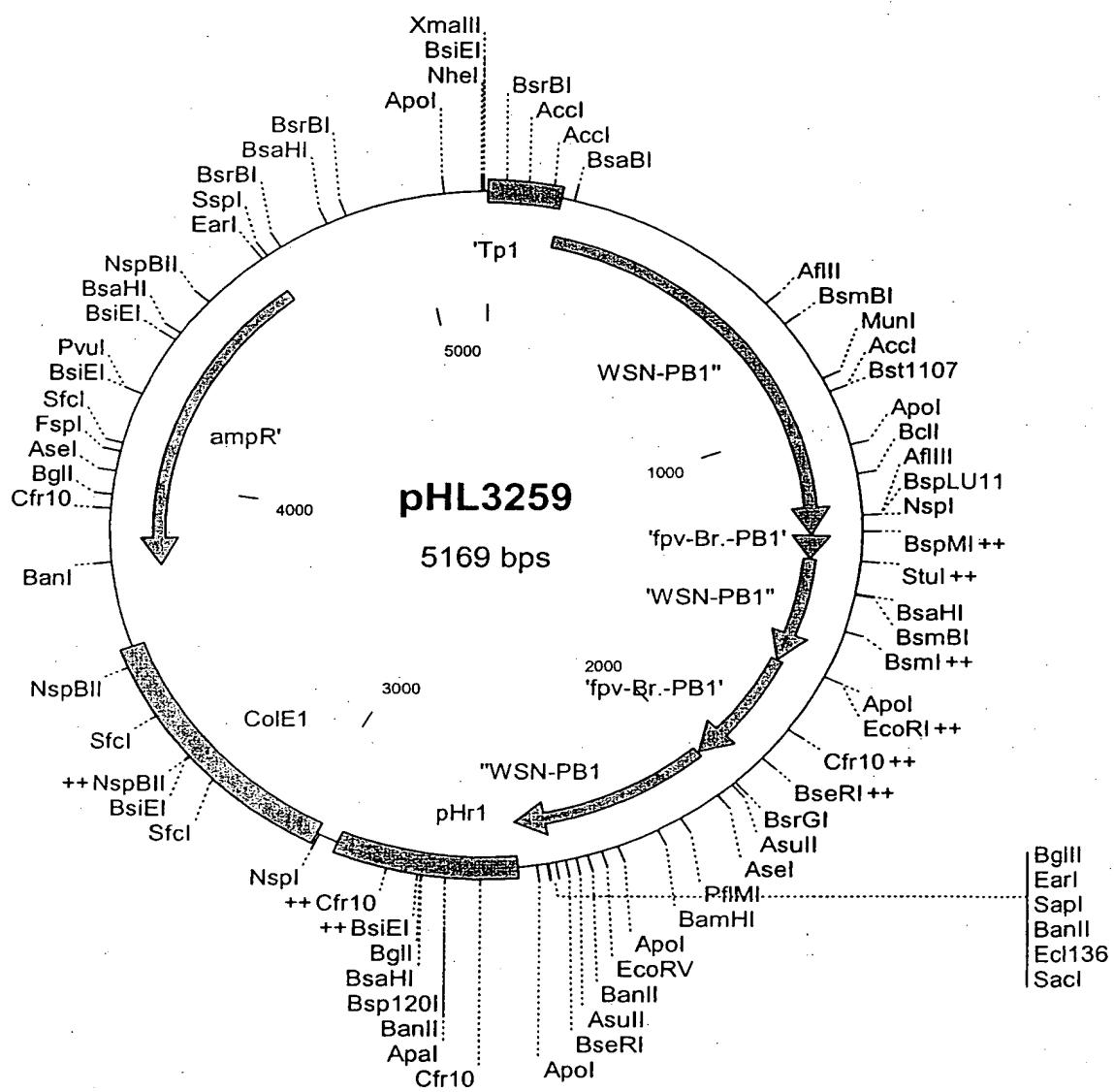


Fig. 16

